IN THE SPECIFICATION:

Please amend the paragraph beginning at page 6, line 1, as follows.

Another important routing problem is providing backup paths in case a path through which data is currently being routed becomes unusable. For instance, packets from both source devices 110 and 120 might be routed through the path containing links 135. This path is called the primary path, and this path must, in this example, have enough capacity to support both source devices 110 and 120. For example, if source device 110 needs a capacity of 5 units and source device 120 needs a capacity of 7 units, then the path through links 135 must support at least a capacity of 12 units. The backup paths in this example are the paths through links 145 and links 155. These backup paths are called secondary paths, and capacity on these paths is reserved in case a failure occurs on the links 135 or nodes 130. In many systems, the capacity reserved on the secondary paths is at least the capacity on the primary paths. Therefore, in this example, 12 units of capacity must be reserved on the reserve paths having links 145 and 155. Assume that the reserved capacity on the path having links 145 is 5 units and the reserved capacity on the path having links 155 is 7 units. In this situation, the system 100 can respond to a failure of ~~an~~ link 135 or node 130-2 by rerouting the packets from source device 110 through the path having links 145 and by rerouting the packets from source device 120 through the path having links 155. A system 100 or network 170 that provides reserve capacity for data is said to support recovery, and a system 100 or network 170 that reserves secondary capacity equivalent to the primary capacity is said to support 1-to-1 or 1+1 protection.

Please amend the paragraph beginning at page 10, line 26, as follows.

In a preferred embodiment, all or a portion of network 270 employs label switching. This label switching is generally controlled through Multi-Protocol Label Switching (MPLS), which can include Multi-Protocol Wavelength Switching (MPλS), and its control protocols. A good introduction to MPLS and MPλS is given in Jarram and Farrel, "MPLS in Optical Networks: An Analysis of the Features of MPLS and Generalized MPLS and Their

Application to Optical Networks, with Reference to the Link Management Protocol and Optical UNI," white paper from Data Connection, 100 Church St., Enfield, UK, ~~http://www.dataconnection.com~~ (Oct. 2001), the disclosure of which is hereby incorporated by reference.

Please amend the paragraph beginning at page 19, line 10, as follows.

Referring now to FIG. 4, a method 400 is shown for determining an approximate solution to network routing. Method 400 is performed by a network controller, although other computer systems may also perform the method. First, the method 400 starts with ~~by~~ setting a dual solution $h^q(e) = \delta / u(e)$ (step 410), for an appropriately small δ, which will be given later as a function of ε, m, and $|Q|$, and a primal solution $x = y = 0$ (step 415). Given any vector h, one can obtain w by setting $w^{P'}$ equal to the minimum over all possible backup paths P for P' of $\sum_{q:P' \in \Lambda(q)} \sum_{e \in P} h^q(e)$. Define $h^q(e)$ as $h^q(P) := \sum_{e \in P} h^q(e)$. Then define Z_k as follows.

$$Z_k \equiv \min_{P_1 \in \Lambda_k} \left[\sum_{q:P_1 \notin \Lambda(q)} h^q(P_1) + \min_{P_2 \in \Lambda_k \backslash P_1} \sum_{q:P_1 \in \Lambda(q)} h^q(P_2) \right]$$

$$= \min_{P_1, P_2 \in \Lambda_k : P_1 \neq P_2} \left[\sum_{q:P_1 \notin \Lambda(q)} h^q(P_1) + \sum_{q:P_1 \in \Lambda(q)} h^q(P_2) \right] \qquad (2)$$

Note that what has been ensured is that all the dual equations, but that for λ, are satisfied. To satisfy the λ equation, simply divide all dual variables by $\alpha + \sum_{k \in K} Z_k d_k$ to obtain a feasible solution that satisfies $\sum_k d_k Z_k = 1$.